

**A METHOD AND APPARATUS FOR IMPROVING
RECEIVED SIGNAL QUALITY IN AN IMPULSE RADIO SYSTEM**

ABSTRACT

An impulse radio system includes an impulse transmitter that transmits a pulse train
5 comprising a number of pulses that are positioned in time for conveying an information
signal. An impulse receiver receives the pulse train in accordance with specified arrival
times of each pulse and measures interference samples at interference sample times that do
not coincide with the pulse arrival times. The interference sample times are varied and the
received pulse train signal is modified until a received signal quality criterion is satisfied.
10 The interference sample times may be specified by a code that may also specify pulse arrival
times.